

CLAIMS

1. A light diffusing element comprising: a passage part which is provided on an optical axis of light emitted from an illuminator and which passes, as first light, light traveling in substantially parallel to the optical axis while not scattering the light; and a diffusion part which is provided around the passage part and which scatters light spreading outward from the optical axis by a predetermined angle or more and emanates the light as second light, wherein a light irradiation area defined by irradiating the first light is irradiated with the second light by the diffusion part to control illuminance distribution in the light irradiation area.

2. The light diffusing element according to claim 1, wherein the illuminance distribution is so configured as to keep a predetermined evenness level.

3. The light diffusing element according to claim 1, wherein an optical element for refracting light is provided in the passage part.

4. The light diffusing element according to claim 1, wherein the diffusion part is composed of a diffuse reflection surface which is so arranged as to surround the optical axis of the light from a side periphery thereof and which is oriented inwardly, and wherein the passage part is set in space formed by being surrounded by the diffuse reflection surface.

5. The light diffusing element according to claim 4, wherein the diffuse reflection surface is formed on an inner surface of a cylinder which is parallel to the optical axis.

6. The light diffusing element according to claim 4, further

comprising a reflection surface which is provided at a side opposite to a light exit direction of the illuminator and which has a surface direction with a component facing the light exit direction side.

7. The light diffusing element according to claim 1,
wherein the diffusion part is composed of a transmission and scattering member which scatters light while passing the light.

8. The light diffusing element according to claim 1,
wherein the illuminator is an LED, an SLD, an LD, an EL element, a cold cathode-ray source, or a light exit end of a light guide.

9. A light diffusing element comprising: the passage part which is provided on the optical axis of light emitted from the illuminator and which passes, as first light, light traveling in substantially parallel to the optical axis without scattering the light; an optical element which is provided in the passage part and which refracts light; and a diffuse reflection surface which is provided on an inner surface of a cylinder with the optical axis as an axial line and which scatters inwardly light spreading outward from the optical axis by a predetermined angle or more and then emanates the light as second light, wherein a light irradiation area defined by irradiating the first light is irradiated with the second light to control illuminance distribution in the light irradiation area so as to keep a predetermined evenness level.